

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: KWON, Young-Jun

SERIAL NO.: (International Serial No. PCT/KR2004/000799 )

FILED: Herewith (International Filing Date: 7 April 2004)

TITLE: FUNCTIONAL TOOTHBRUSH

REMARKS ON PRELIMINARY AMENDMENT

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In conjunction with the filing of the present application, and prior to an initial Official Action on this matter, please amend the above-identified application as provided in the attached Marked Up Copy and Substitute Specification.

Please note that the following amendments in the Substitute Specification apply to the attached specification and claims labeled for "U.S. filing". This combined application incorporates the original application and any amendments or annex to the International Application in the proper order, including the correct original and substitute pages, claims and drawing sheets.

In this preliminary amendment, please consider the following remarks in conjunction with the amendments to the above-identified application as follows:

REMARKS

The present Preliminary Amendment has been entered for the purpose of placing the application into a more proper U.S. format. In particular, certain grammatical and idiomatic inconsistencies have been corrected by amendment to the specification, and the application is

corrected for certain typographical errors found in the originally submitted application. No new matter has been added by these amendments. The present application incorporates the original filing including any amendments made in the international filing. There was no amendment in the International Application, and there is no annex to the International Preliminary Examination Report because there were no Demand for the IPER. The present specification is an English language translation of an originally Korean language document.

The Claims have been amended so as to conform with U.S. requirements and so as to remove multiple dependent claims. The Abstract has been amended so as to conform to U.S. filing requirements.

Applicant respectfully requests that the present Amendment be entered prior to an initial Official Action on the present application.

Respectfully submitted,

29 August 2006

Date

/s/ Andrew W. Chu

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## CLAIMS

I claim:

1. (Currently amended) A functional toothbrush, comprising:

a toothbrush body with a head part;

a first plurality of rows, each row having needle-shaped bristles (~~3~~) set in a longitudinally elongate groove (~~1~~) and longitudinally arranged along an outer edge of a said head part (~~11~~) of a said toothbrush body (~~10~~); and

~~other~~ a second plurality of rows, each row having needle-shaped bristles (~~3~~) set in a latitudinally elongate groove (~~1'~~) and longitudinally arranged on a central portion of ~~the~~ said head part (~~11~~) of ~~the~~ said toothbrush body (~~10~~),

wherein a length of each of the needle-shaped bristles (~~3~~) set in ~~the~~ said outer edge of ~~the~~ said head part (~~11~~) is longer than a length of each of the needle-shaped bristles (~~3~~) set in ~~the~~ said central portion of ~~the~~ said head part (~~11~~) by 1.5-3.5mm, ~~and~~ each of the elongate grooves (~~1, 1'~~) ~~has~~ having an elliptical shape.

2. (Currently amended) The functional toothbrush according to claim 1, wherein the needle-shaped bristles (~~3~~) set in each of the elongate grooves (~~1, 1'~~) comprise ~~various~~ a plurality of bristles having different end points from 0.01 to 0.03mm in thickness and different tapers from 5 to 12mm in length.

3. (Currently amended) The functional toothbrush according to claim 1, wherein each of the elongate grooves (~~1, 1'~~) has a minor axis from 1.6 to 2.5mm in length and a major axis from 2.5 to 5.0mm in length.

\*Marked Up Copy\*

4. (Currently amended) The functional toothbrush according to claim 1, wherein each of the needle-shaped bristles (3) is set in each of the elongate grooves (1, 1') after being folded such that a height difference of 0.5-1.5mm exists between both ends of the folded needle-shaped bristle (3).

5. (Currently amended) A method for manufacturing a toothbrush ~~provided with, said~~ toothbrush having a toothbrush body with a head part, said method comprising the steps of:

setting a first plurality of rows, each row having needle-shaped bristles (3) set, in a longitudinally elongate groove (1) and longitudinally ~~arranged~~ arranging each row along an outer edge of a said head part (11) of a said toothbrush body (10); and

setting a second plurality of other rows, each row having needle-shaped bristles (3) set in a latitudinally elongate groove (1') and longitudinally ~~arranged~~ arranging each row on a central portion of ~~the~~ said head part (11) of ~~the~~ said toothbrush body (10), wherein each of the elongate grooves (1, 1') formed on ~~the~~ said head part (11) has an elliptical shape, and the needle-shaped bristles (3) ~~are being~~ set such that ~~the~~ length of each of the needle-shaped bristles (3) set in the elongate groove (1) placed on an outside part of ~~the~~ said head part (11) is longer than ~~the~~ length of each of the needle-shaped bristles (3) set in the elongate groove (1') placed on an inside part of ~~the~~ said head part (11) by 1.5-3.5mm.

6. (Currently amended) The method for manufacturing the toothbrush according to claim 5, wherein the needle-shaped bristles (3) set in each of the elongate grooves (1, 1') comprise ~~various~~ a plurality of bristles having different end points from 0.01 to 0.03mm in thickness and different tapers from 5 to 12mm in length.

7. (Currently amended) The method for manufacturing the toothbrush according to claim 5, wherein each of the elongate grooves (1, 1') has a minor axis from 1.6 to 2.5mm in length and a major axis from 2.5 to 5.0mm in length.

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8. (Currently amended) The method for manufacturing the toothbrush according to claim 5,  
further comprising:

\_\_\_\_\_ folding ~~wherein~~ each of the needle-shaped bristles ~~(3)~~ is set in each of the elongate  
grooves ~~(1, 1')~~ after being folded such that a height difference from 0.5 to 1.5mm exists between  
both ends of the folded needle-shaped bristle ~~(3)~~.